3

Education

3.1 Introduction

Delhi is a city of heterogeneous cultures wherein people of different socio-economic groups, religious faiths and nationalities live together. Education and the cultural environment, which nurture tolerance and support the higher ideals of life, bear a special importance to cosmopolitan Delhi. All forms of education and training have the potential to enhance capabilities, which can be further transformed into well-being and economic benefits. Education creates conducive social and cultural environments, enabling people to live in peace and harmony. However, harmony in society is possible only if access to education and the possibilities for upward mobility are made available to a majority of the people. In this context, the status of education in Delhi acquires added importance. In this chapter, we present the human resource scenario in Delhi along with its composition in terms of the levels of education and the various interventions that have been put into place in order to address the educational challenges faced by the state. The vision for the future in the sphere of education for Delhi would thus entail improvements in the quality of education, coupled with inclusive access aimed at reaching the goal of a fully literate state, with an average of ten years of schooling for its entire population by the year 2020.

## 3.2 Human Resource and Composition by Levels of Education

3.2.1 Findings from the Perceptions Survey

A large-scale survey for assessing people's perceptions (hereafter referred to as the 'Perception Survey, 2013') was conducted by the Institute for Human Development (IHD), which investigated the quality of human resources by levels of education. This survey covered a population above 15 years of age and reported that a large proportion of the population in Delhi was highly qualified, having acquired degrees from various higher education institutions. Close to one-fifth (17 per cent) of the population possessed graduate and postgraduate qualifications with 2 per cent having professional and higher research degrees. In absolute terms, out of the total fifteen years and above population estimates of 11.8 million for Delhi, 2.0 million were graduates and postgraduates, and 0.27 million possessed professional and higher research degrees, showcasing the presence of human resources of high quality in the state (Figure 3.1). This is in sharp contrast to the all-India scenario wherein approximately 7 per cent of the population above 15 years of age possessed higher education qualifications (NSS, 2009-10).

Further, approximately one-third of the population possessed matriculate and higher secondary qualifications. What is of essence is that the primary and middle school graduates (who together comprise 39 per cent of the total population) are able to acquire higher education or appropriate skill sets, and the existing 18 per cent of the illiterates have been converted into literates by imparting necessary skills to them, thereby making their upward transition a reality.

Figure 3.1

Delhi: Human Resource by Levels of Education
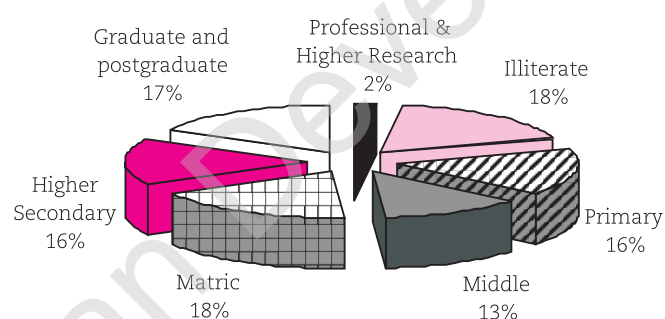
Note: Percentages presented as a proportion of population in the 15 years and above age group.
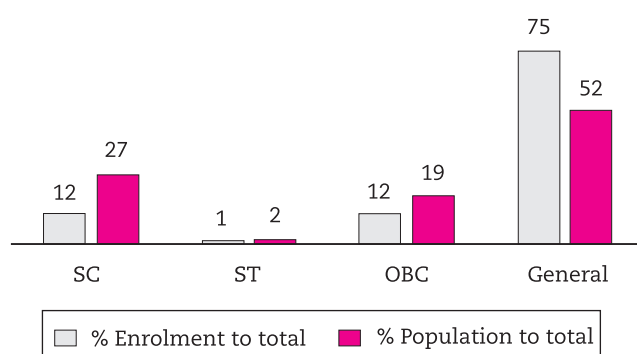
Source: Perceptions Survey, 2013.

It would be interesting to further probe the social, economic, religious and other characteristics of those possessing higher educational degrees in Delhi. In terms of the social composition, 75 per cent of those possessing higher educational degrees belonged to the general category. The reserved categories including the Scheduled Castes (SCs), Scheduled Tribes (STs) and Other Backward Castes (OBCs) constituted a small proportion of the higher education graduates at 12, 1 and 12 per cent, respectively.[1] Thus, higher educational qualifications were clearly not fairly represented amongst the population groups. This was particularly true of the SCs, who constituted 27 per cent of the total population, out of which only 12 per cent were higher educational graduates (Figure 3.2). The survey also found that while Muslims in Delhi constituted 12 per cent of the total population, only 4 per cent of this population comprised graduates. The SCs and Muslims were also found to show low representation amongst the population groups with higher educational qualifications. Thus, the SCs and Muslims emerge as the two important target groups in whose case the transition to higher education needs to be promoted for ensuring a prosperous and progressive

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1. It may be noted that in the total population of 11.8 million, the percentages of persons belonging to the general, SC, ST and OBC categories are 51.8, 27, 2.1 and 19.1, respectively.

Delhi. Another significant finding of the Perceptions Survey is that a large proportion of the graduates earned monthly incomes ranging from Rs. 20,000 to Rs. 50,000 (while 39 per cent of these were graduates and postgraduates, 32 per cent were professionals or higher research degree holders). Further, close to two-thirds of the graduates lived comfortably in authorised colonies.

Figure 3.2

Per cent Distribution of Graduates with Higher Education Qualifications and Population

Source: Perceptions Survey, 2013.

An important target group in Delhi comprises people who live in unauthorised colonies, urban villages, *Jhuggi Jhopri (JJ)* or slum clusters and JJ resettlement colonies. They also constitute vulnerable groups, irrespective of their caste and religion, with many of them engaged as temporary, casual or self-employed workers. These groups cannot be ignored as they are the providers of important services and contribute significantly to economic activities in Delhi. The Perceptions Survey provides useful information regarding the levels of education for the population aged above 25 years, residing in these areas. Approximately 5.6 million people, constituting 48 per cent of the total population, live in these four types of settlements in Delhi. The Perceptions Survey finds that amongst all the illiterate respondents, 68 per cent live in these settlements, while 56 per cent of those who have education up to the primary and middle school levels also reside here. What, therefore, emerges as an important policy direction here is the need for strategic interventions to improve the education and skill status of persons living in these settlements. This, in turn, would necessitate the monitoring and supervision of targets under the literacy and universal elementary education programmes of the Sarva Shiksha Abhiyan (SSA), which, in turn, would contribute immensely towards making the education scenario more inclusive in Delhi, one

of the basic tenets of the Twelfth Five Year Plan, thereby enhancing the capabilities of the vulnerable populace in the process. Another interesting feature observed during the survey is that as regards the occupational structure and levels of education of the respondents, almost 22 per cent of the population above 15 years of age comprises professionals and semi-professionals working in different capacities, a majority of whom possess higher educational qualifications. Service workers constitute 30 per cent of the population and play an important role in terms of their contributions. However, 85 per cent of these service workers are either illiterate or have differing levels of school education. The unskilled and skilled but low-paid population, with mostly low levels of education, constitute 20 per cent and 23 per cent of the population, respectively, and constitute the target age group of people who need to be imparted skills on a priority basis. Thus, three categories of workers in the city, viz., service workers, skilled but low-paid workers, and unskilled workers (constituting 74 per cent of the population) possess low levels of education. The introduction of policy interventions aimed at upgrading the skills of the working population and certifying the same is the need of the hour in order to augment the market value of these workers. In this context, a major policy prescription that clearly emerges from the survey is the need for initiating skill development programmes in partnership with various non-governmental organisations (NGOs) and industry associations for upgrading and promoting skill building among this target population.

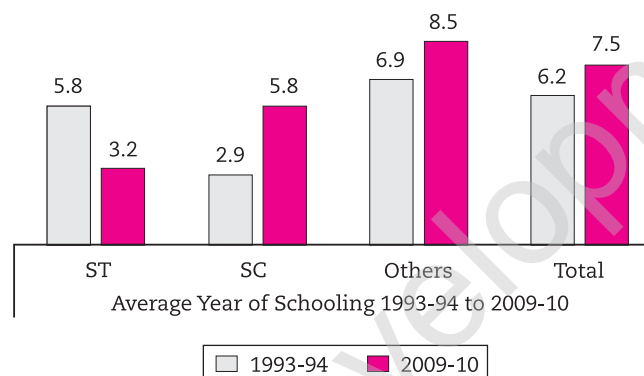### 3.2.2 *Average Number of Years of Schooling*

The average number of years of schooling is a good indicator of the quality of human resources in a particular sample group.[1] Using data from the National Sample Survey (NSS) 66th Round (2009-10), Figure 3.3 presents a comparative picture of the average number of years of schooling for Delhi

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1. The average number of years of schooling is calculated by assigning weights equal to the percentage distribution at each level of schooling and by subsequently multiplying the weights with the number of years of schooling at each level of education (including illiterates, 0, primary level, 5, and so on) and then by summing them up and dividing by the total weights, that is, 100. Thus, if 40 per cent of the population is illiterate and 60 per cent of them are educated up to the primary level, then the weights would be 40 and 60, respectively, and the levels of education identified as the number of years, that is, 0 and 5, would be multiplied by 40 and 60, respectively, and then added. The numerator would then be 300 and the denominator, 100. The average number of years of schooling in this example would then turn out to be 3.

and all-India, disaggregated by social groups. On an average, the population in Delhi has 7.5 years of schooling as compared to the corresponding all-India figure of 4.8 years of schooling. For all social groups too, Delhi fares better with regard to the average number of years of schooling with the exception of the STs, who may be showing a downward bias in this area due to their small sample size.

Figure 3.3

Average Years of Schooling, 2009-10

Average Year of Schooling 2009-10

☐ Delhi   ■ All India
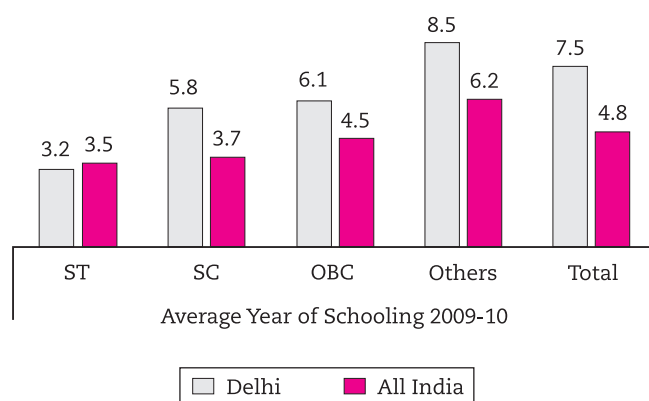
Source: NSS 66th Round (2009-10).

Figure 3.4

Average Years of Schooling for Delhi: 1993-94 to 2009-10

Average Year of Schooling 1993-94 to 2009-10

☐ 1993-94   ■ 2009-10

Source: NSS (1993-94 and 2009-10).

A comparison of the average number of years of schooling over two NSS time points, viz., 1993-94 and 2009-10 (Figure 3.4) reveals an improvement from 6.2 to 7.5 years. The SC population shows a marked improvement in the average number of years of schooling from 2.9 years to 5.8 years during the period under consideration, which could be a reflection of the various interventions undertaken

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Box 3.1

Pathways to Achieving Ten Years of Average Schooling in Delhi by 2020-21

A total number of ten years of schooling may be fixed as a norm to be achieved by 2020-21 to bring Delhi at par with many developed nations. This may be considered as representative of a very high quality of life, almost similar to that of the developed countries. Such a norm means that on an average, every person should have acquired education up to the secondary school level. A projection exercise was carried out in order to understand what needs to be done to achieve this norm for Delhi by 2021. The resultant projection was that no person in Delhi should be illiterate or have education below the primary level by 2020-21. In order to achieve this, what is needed is include improvements in the transition of students from primary to middle levels such that 15 and 25 per cent of the population have acquired education up to the primary and middle school levels, respectively, representing an increase from the present (NSS estimated level in 2009-10) proportion of 11.8 per cent to 25 per cent at the middle school level. Further, there is need for substantially enhancing the capacity to accommodate secondary and senior secondary level students to ensure that the proportion of those with secondary level education increases from 13.8 per cent in 2009-10 to 20 per cent in 2020-21, while the proportion of those with senior secondary level education increases from 13.7 per cent to 20 per cent during the corresponding period. Simultaneously, there is need for expanding the capacity of tertiary education institutions to ensure that the proportion of those with tertiary level of education increase from 17.1 per cent in 2009-10 to 20 per cent by 2020-21. There could be various pathways to achieve this targeted average number of ten years of schooling. A reasonable pathway could be to increase capacity at the primary and upper primary school levels by at least 100 per cent, at the secondary and senior secondary school levels by 50 per cent, and at the tertiary education levels by 20 per cent. Such an expansion is, however, based on the existing population numbers. Surely, by 2020-21 there would also be an absolute increase in the population as compared to the population in 2009-10. Any planning exercise geared to meet this expansion path must thus also take into account the absolute increase in the population. This means that the capacity expansion would be a multiple of what is envisaged above. The multiplier would depend on the proportion of increase in the population in 2020-21 over that in 2009-10.

Source: Details of calculations presented in Annexure 3.1.

by the state government under the SSA. Surprisingly, the average number of years of schooling for the STs shows a decline over the same period from 5.8 years to 3.2 years, which could be a result of the large-scale migration of the illiterate ST population from other states into Delhi, or due to the bias resulting from the small sample size. Hence, various strategies aimed at inclusion for enhancing the average number of years of schooling for the state need to keep these findings on SCs and STs as the focal points for implementing their intervention plans.

3.3 Status of Education

Delhi is the academic hub of India, and is responsible for nurturing human resources across the country by providing education and skills of the highest standards. A significant point to be noted is that many political discussions and socio-cultural discourses are profoundly supported by research institutions, universities and NGOs in Delhi, which also has one of the largest densities of institutions, scholars of repute, and varied groups of student communities in the country. The universities in the city attract students from all over the country as well as from abroad, making it the educational and cultural centre of the country. The city also witnesses the inflow of private capital at all levels of education. Since Delhi is a part of the National Capital Region (NCR), the growth of educational institutions in Delhi should be seen as part of the NCR planning process for human development.

3.3.1 The Literacy Rate

Literacy is an integral and indispensable element of educational development. It can pave the way for facilitating reductions in population growth, child mortality and poverty, and the attainment of both gender parity as well as sustainable and holistic growth. It also provides for the nurturance of democratic values such as freedom and peace among the people (Sen, 1999). Delhi, the second most populous metro of the country after Mumbai, with a population of 16.3 million, recorded a literacy rate of 86.21 per cent in 2011, showing an increase of around 4.54 percentage points over the corresponding figure for Census 2001 (see Table 3.1). In 2011, within Delhi, the literacy rates varied from 82.8 per cent to 89.3 per cent amongst its districts (with North-east Delhi reporting the lowest literacy rate and New Delhi the highest) (Figure 3.5).

One of the most significant developments in the city has been the narrowing of the gender gap in the

literacy rate, representing a drop of 2.53 percentage points, which is also the highest fall recorded in this sphere so far. The gender gap in literacy now stands at approximately 11 percentage points (Census, 2011). While there has been a narrowing down in the gender gap in literacy, the overall literacy rate in Delhi is below the corresponding figures for the cities of Mumbai, Chennai, Bangalore and Kolkata, with Mumbai recording the highest percentage of 91 in 2011.

Table 3.1

Literacy Rates (percentage) in India and Delhi: 1981–2011

Census Year	India			Delhi		
	Total	Male	Female	Total	Male	Female
1981	43.57	56.38	29.76	61.54	68.4	53.07
1991	52.21	64.13	39.29	75.29	82.01	66.99
2001	64.80	75.30	53.70	81.67	87.33	74.71
2011	73.00	80.90	64.60	86.21	90.90	80.80

Note: The literacy rates for the years 1981 to 2011 relate to the population aged 7 years and above.

Source: Socio-Economic Profile 2011-12, Available at *www.delhiplanning.nic.in* accessed on 07 May 2013.
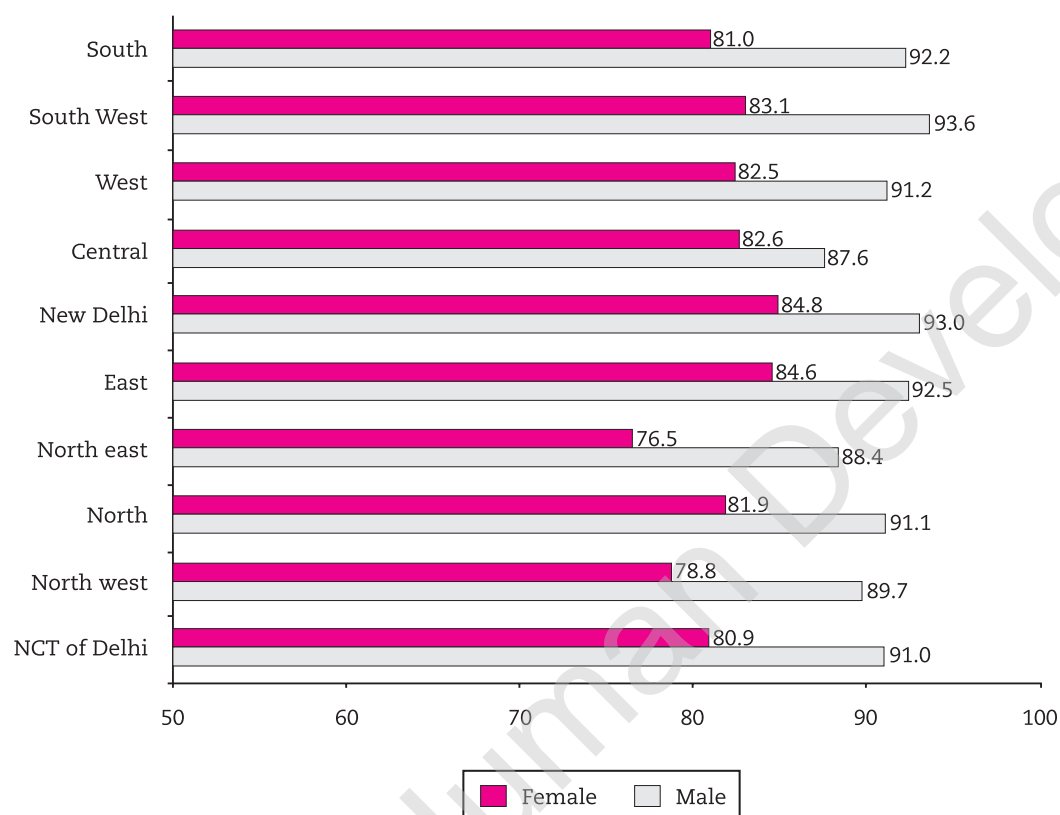
The gender gap in the literacy rate in 2001 was the highest in the South, North-east and North-west districts of Delhi, but this scenario showed a change in 2011, with the East, North and South districts showing the largest gender gap in literacy rates (Figure 3.6). Over the period 2001-11, the East and West districts reported a worsening in the gender gap in literacy while the North-east district reported the sharpest decline in the gender gap for this indicator. What is worth noting is that in 2011, even within the highly literate districts such as New Delhi and South-west Delhi, the gender gap in literacy was relatively high (Figure 3.6). Thus, there is need for a focused strategy for enhancing the female literacy rate in Delhi, within the framework of the 'Sakshar Bharat' programme of the Government of India.

3.3.2 The Gross Enrolment Ratio

The role of Universal Elementary Education (UEE) in strengthening the social fabric of democracy through the provisioning of equal opportunities to all is a declared objective of human development. The Gross Enrolment Ratios (GERs) in 2010-11 at the primary and upper primary levels in Delhi are 127 and

Figure 3.5

District-wise Literacy Rates (per cent) in Delhi 2011

District	Female	Male
South	81.0	92.2
South West	83.1	93.6
West	82.5	91.2
Central	82.6	87.6
New Delhi	84.8	93.0
East	84.6	92.5
North east	76.5	88.4
North	81.9	91.1
North west	78.8	89.7
NCT of Delhi	80.9	91.0

Source: Census of India, 2011.

Figure 3.6

Gender Gap in Literacy Rate (per cent) 2001 and 2011

| District	2001	2011
North West	14.3	10.1
North	12.1	11.0
North East	15.7	9.1
East	5.5	11.9
New Delhi	13.3	7.9
Central	12.6	8.2
West	4.7	5.0
South West	12.3	8.7
South	15.9	10.6
Delhi	13.6	11.2

Source: Calculated from Census of India, 2001 and 2011.

108, respectively, as opposed to the corresponding all-India figures of 116 and 85, respectively.[1] The GERs for the SCs at 69.5 per cent and for the STs at 54.1 are rather low and highlight the need for specifically targeted interventions (Figure 3.7). The GER for SC children has fallen to 54.1 per cent at the upper primary level and witnessed a further drop to 64 and 38.6 per cent at the secondary and senior secondary levels, respectively (Figure 3.8), thereby clearly indicating the difficulties faced by students belonging to these communities in making the transition to higher levels of education. The low transition from the primary to upper primary levels and further to higher levels of school education needs to be probed in terms of the vulnerability of the weaker sections to move forward, and the lack of adequate number of institutions to enrol students or of the latter's promptness to join the labour market, among other factors. In a study conducted in the slum areas of Delhi, Chugh (2011) finds that the incidence of drop-outs at the secondary level of schooling is more prevalent in the slums which are inhabited by migrants from other states. Chugh reports that low achievers and students from the low socio-economic backgrounds are at a much higher risk of dropping out of school, which could be due to several reasons such as inadequate parenting, inability to afford educational expenditures, poor schooling infrastructure, de-motivated teachers, pressures to augment family incomes, parental perceptions that schooling has limited economic returns, peers with low aspirations, poor nutrition and health, and the existence of too few role models in the community. Yuko (2009) reports an attendance of 54.5 per cent among slum children in the areas she surveyed for her study, with 14.1 per cent drop-outs (ever attended school) and 31.5 per cent for those who never attended school. The study also highlights the fact that almost all slum children were enrolled in government schools, with the two main factors contributing to the high level of drop-outs among these children being financial reasons and the negative perception of education among their parents. being cited as two of the main factors contributing to their dropping out.

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1. The GER is calculated as the ratio of the number of students in a given class or set of classes to the number of children in the appropriate age group. The Net Enrolment Ratio (NER) is a better means of capturing figures for age-appropriate enrolment, but it is difficult to obtain age-wise enrolment information/data.

Figure 3.7

Gross Enrolment Ratio, 2010-11
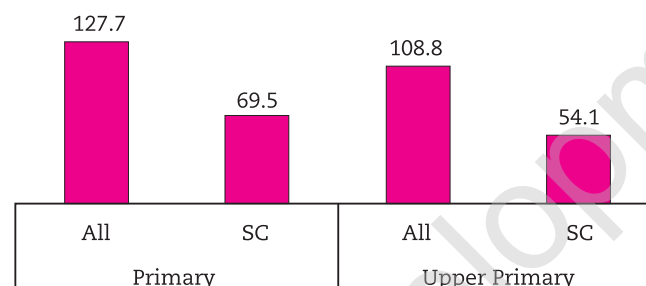
Source: Selected Educational Statistics, 2010-11, Ministry of Human Resource Development (MHRD), Government of India.

Figure 3.8

Gross Enrolment Ratio (2010-11)
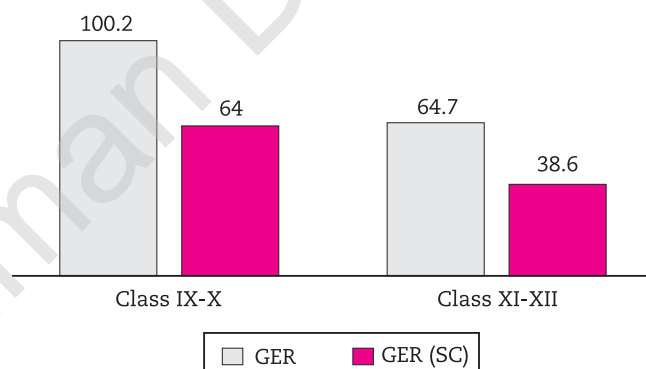
Source: Selected Educational Statistics, MHRD, Government of India, 2010-11.

3.3.3 Elementary Education: Salient Features

Some of the salient features of the elementary education scenario in Delhi can be encapsulated here. In Delhi, primary education is mainly the responsibility of local bodies—the Municipal Corporation of Delhi (MCD), the New Delhi Municipal Corporation (NDMC) and the Delhi Cantonment Board (DCB). However, the Directorate of Education has also introduced primary classes in 364 Sarvodaya Vidyalayas of the Government of NCT of Delhi. In 2010, there were 5043 schools in Delhi, including 2613 pre-primary and primary schools, 588 middle schools, and 1872 secondary/senior secondary schools providing enrolment to 3.9 million children and with a total teaching staff of 0.11 million (Table 3.2). Of the total 5043 schools, 2666 were government schools and 2377 private schools, indicating a significant role played by the private sector. In order to increase access, the Directorate of Education and the MCD have set up 83 new schools, upgraded 144 and bifurcated 25 existing schools during

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Box 3.2

Special Features of Primary and Upper Primary Schools in Delhi, DISE 2010-11

- The density of primary and upper primary schools per 10 square kilometres in Delhi was 29 and 16, respectively, in 2010-11, which signifies one of the highest figures in India. Paradoxically, however, the number of schools per 1000 child population (aged 6-11 years) is only 3, which is one of the lowest in India. This aptly reflects the relative shortage of primary and upper primary schools in the city.

- A feature worth noting is that the average number of classrooms per school was 16 and that the average number of teachers per school was 15, which is reportedly the highest amongst all states. Therefore, though the number of schools in the city is in short supply, the size of the schools is quite large and partly compensates for the shortage of schools.

- As many as 98 per cent of the upper primary schools (including both government and aided schools) report having less than 220 working days in a year.

- In terms of the basic facilities, all schools had drinking water facilities and 80 per cent had girls' toilets.

- A significant proportion of 80 per cent of the schools also reported having functional computer facilities.

Source: DISE, 2010-11, NUEPA, Delhi.

Table 3.2

School, Enrolment and Teachers in Schools in 2010-11

	Higher Secondary Education (Universities and Colleges)	Senior Level	Secondary Level	Middle Level	Primary Level	Pre-primary Level	Total
Number	207	1392	480	588	2563	50	5073
Enrolment	2,81,987	4,23,950	6,33,842	9,82,949	17,31,123	1,48,601	39,20,465
SCs as a percentage to the total	13.3	11.6	12.7	9.8	10.5	7.6	10.7
STs as a percentage to the total		0.5	0.4	0.3	0.4	0.3	0.4
Teachers	4467	68,255	10,859	7482	28,688	188	1,15,472

Source: Statistical Hand Book, 2012 Education, Available at: *http://www.delhi.gov.in/wps/wcm/connect/doit_des/DES/Our+Services/Statistical+Hand+Book/*; accessed on 10th May 2013.

the Eleventh Five Year Plan. Because of the space constraint, a majority of these schools are run in double shifts.[2] The enrolment of students in primary and upper primary schools was approximately 1.73 and 09 million, respectively, in 2010-11, while at the secondary and senior secondary levels, it was 0.6 million and 0.4 million, respectively.[3] Also, at all levels of education, females comprised 46-47 per cent of

the total enrolment, reflecting gender parity in this sphere.

An important feature of education in Delhi is the marked presence of private schools with 28.4 per cent of all school-going children at the primary and upper primary levels attending private schools (Economic Survey, 2012-13). This proportion increases to 42.71 per cent for the secondary and senior secondary levels, indicating the preference among students for private schooling at higher levels of education (Table 3.3).

2. Source: 'An Approach to the Twelfth Five Year Plan', Government of Delhi, Chapter 7, Available at: *http://www.delhi.gov.in/wps/wcm/connect/DoIT_Planning/planning/important+links/an+approach+to+12th+five+year+plan+%282012-17%29*; accessed on 15th May 2013.

3. Selected Educational Statistics, 2010-11, MHRD, Government of India.

Table 3.3

Share of Private Sector in Enrolment

Classes	Private (in million)	Percentage in Private
Primary and middle levels	0.38	28.4
Secondary and senior secondary levels	1.09	42.7
All	1.48	37.7

Source: Economic Survey, 2012-13, Government of Delhi.

Under Article 21A of the Constitution of India and its consequent legislation, the right of children to free and compulsory education (Right to Education [RTE] Act, 2009) became operative on 1 April 2010. The RTE Act stipulates necessary interventions by the government to realise the goal of universalisation of elementary education. To this end, the target to be achieved by the state government by putting into place various interventions includes: decreases in the pupil–teacher ratio from the existing 46 to 40 at the primary level and from 39 to 35 at the upper primary level. Training has been imparted to 2142 educational administrators in concurrence with the RTE Act provisions. All schools have adopted the Continuous and Comprehensive Evaluation (CCE) scheme. Although currently, School Management Committees (SMCs) do not exist, necessary steps are underway to make them a reality soon. According to the NCERT 3rd Round survey, the students in Delhi have excelled in three subjects—Mathematics, Hindi and Everyday Science (EVS)—and the performance of children is above the national average in class V. In order to enable the Government of NCT Delhi to fulfil all the clauses of the RTE Act, there is need for regular monitoring by a Committee of Experts and of apprising the Government of all the findings through monitoring of reports. In this regard, the role of the SSA in the implementation of the RTE is worth mentioning. Under the SSA, assistance is provided for recruitment and training of teachers, development of infrastructure, and procurement of textbooks, among other things. It also entails the creation of additional posts for teachers to maintain the prescribed norms of the teacher–pupil ratio in all Government schools, provide educational facilities to all children of school-going age by opening new schools and additional sections in all classes, and provision of free-ship quotas for the Economically Weaker Section of Students (EWS) in private schools, among other measures. The private schools that have not been allocated land at concessional rates are reimbursed the cost of the free-ships given to EWS category students admitted by such schools.

The expenditure on the scheme is shared between the Central and state governments in the 65:35 ratio. Improved implementation of the RTE can be achieved by bringing schools run by different managements under one umbrella thus facilitating better co-ordination.

3.3.4 Education for Children with Special Needs (CWSN)

Every disabled child has his/her own strengths and weaknesses. It is the responsibility of the State and educated citizens to create enabling conditions for allowing them to lead a life of dignity. As per the Results Framework for SSA Goals, 2013-14,[1] there are 17,474 children with special needs (CWSNs) enrolled in schools or alternative systems including home-based education in Delhi. The educational requirements of children with special needs have seen a transition from special schools to integrated schools and eventually to inclusive schools. The RTE (2009) mandates the complete inclusion of all children in the schooling processes with a special emphasis on CWSNs. It calls for the placement of CWSNs into neighbourhood schools with necessary support services. Inclusion of all children, including CWSNs, would then facilitate the achievement of UEE. Within the SSA, there is a zero rejection policy for CWSNs with a special provisioning of Rs. 3,000 per annum for every CWSN per annum. It also provides guidelines for Barrier Free Access (BFA) for all children, which is not just limited to buildings and physical infrastructure, but also extends to the curriculum and teaching–learning processes in order to address the various learning needs of CWSNs.[2] It is important to note the efforts made in this direction by individuals and institutions in Delhi, which have contributed towards addressing the educational needs of CWSNs.[3] A report by Deshkal, UNICEF and Care Foundation (2010)[4] on inclusive classrooms very aptly points out, "For classrooms to be fully inclusive, it should be ensured that the curriculum is accessible to and relevant for all children in terms of what is

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1. Available at: *http://ssa.nic.in/pabminutes-documents/Pab%20 Minutes%202013-14/Delhi/Annexure%20-%20IV%20Result%20 Frame%20Work%20Delhi.pdf*; accessed on 15th May 2013.

2. Ibid.

3. Examples of schools and children with special needs who have benefited from inclusive education provided by some schools in Delhi can be accessed at the following websites: *purti.org/our-work, www.marshaforest.com/centreproject/html* accessed on 17th May 2013.

4. "Inclusive Classroom, Social Inclusion/Exclusion and Diversity: Perspectives, Policies and Practices", Deshkal, UNICEF and Care Foundation (2010).

taught (content), how it is taught (method), how the children learn best (process), and how it relates to the life experiences of the children and the environment in which they live and learn. In order to be inclusive of children with different backgrounds and abilities, curriculum material needs to be sensitive to the diversity of children and their circumstances."

3.3.5 Educational Performance/Achievements

An analysis of the Class XII Central Board of Secondary Education (CBSE) results for the year 2012[5] shows that one-third (33.7 per cent) of the students from private schools, more than half (56 per cent) from government schools, 7.1 per cent from government-aided schools, 3.1 per cent from Kendriya Vidyalayas (KVS) and 0.3 per cent from the NDMC schools appeared in the CBSE Board examinations, and reported almost similar pass rates. This brings out the fact that though private schools do play an important role in the sphere of higher education in Delhi, government schools also have an equally pivotal role to play. While the success rate in private schools was 90 per cent, the corresponding rate for government schools was 87.72 per cent, reflecting that government schools in Delhi do not lag behind private schools in terms of the performance of students the Class XII Board examinations. Remarkably, girls' schools showed pass percentages of 91 per cent as opposed to 81 per cent for boys' schools. However, an issue of some concern is the fact that only 7 per cent of the students appeared in the examination from the Science stream and 6 per cent from the vocational stream as opposed to 68 per cent from the Arts and 20 per cent from the Commerce streams, pointing towards the need to promote the science and vocational streams. Another area of concern is the low pass percentage in Economics in government schools. Some of the schools, including Urdu schools, where the pass percentage is below 50 per cent also need attention.[6] Learning achievements at the primary level for slum students reveals that schools managed by the MCD reported the lowest mean scores—13 per cent learners reported achievement scores of less than 20 per cent (Agrawal and Chugh, 2003). Recent studies by ASER (2012) confirm the poor learning achievements of primary level students in the rural areas.

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5. Directorate of Education, Government of Delhi.

6. *Source*: Directorate of Education, Analysis of CBSE Results, 2012, Available at: *http://www.edudel.nic.in/Result_Analysis/2012/ResultCBSE12th2012.pdf*; accessed on 13th May 2013.

3.4 The Higher Education Scenario

In the field of higher education, there are 160 colleges in the city, which includes 83 Delhi University (DU) colleges, 77 colleges affiliated with the Guru Gobind Indraprastha (GGSIP) University in 2012. An issue that needs to be addressed is the fact that DU, Jawaharlal Nehru University (JNU), and Jamia Milia Islamia University, though located in Delhi, are Central universities and thus do not have any quota or preference for Delhi students. The South Asia University is a welcome addition, making Delhi an education hub for neighbouring countries. The Delhi Technological University (DTU) has been a milestone in equipping Delhi with world class education, research and innovation capabilities. The Indira Gandhi National Open University (IGNOU) facilitates admission to all students seeking higher education, training and research in varied fields. In the field of professional and technical education, Delhi has 107 degree and postgraduate level professional and technical educational institutions affiliated to the GGSIP University, DU and other universities. The well-known All India Institute of Medical Sciences (AIIMS), Indian Institute of Technology (IIT), and Indian Statistical Institute (ISI) add special status to the state by promoting sheer excellence in education. There are 11 deemed universities specialising in different disciplines as well. There are 21 diploma level institutions, which includes 12 Government/aided polytechnic institutions and 9 private sector institutions. The number of certificate level institutions in the form of Industrial Training Institute (ITI) and Industrial Training Centres (ITC), Basic Training Centres (BTC) and Commercial Secretariat Institute (CSI) reached 75 in 2010, which includes 17 Government ITIs and 56 private sector ITIs. The total enrolment in diploma and certificate level courses is 22,185 and the total number of teachers is 1,434 teachers (Table 3.4). The setting up

Table 3.4

Number of Technical Education Institutions under the Directorate of Training and Technical Education, Government of NCT of Delhi

	ITIs	ITCs	BTC	CSI	Polytechnics	Total
Number of institutions	17	56	1	1	21	95
Students	7545	1762	512	155	12,211	22,185
Teachers	521	242	32	3	636	1434

Source: Statistical Hand Book, 2012 Education, Available on *http://www.delhi.gov.in/wps/wcm/connect/doit_des/DES/Our+Services/Statistical+Hand+Book/*; accessed on 10th May 2013.

Box 3.3

Three Flagship Universities in the State—A Much Needed Initiative

- For focused development in the field of higher education, the Government of NCT of Delhi established a separate Directorate of Higher Education in the year 1997. Delhi Government also established three State Universities namely, Guru Gobind Singh Inraprastha University, National Law University and Bharat Ratna Dr. B.R. Ambedkar University in the year 1998, 2008 and 2008, respectively.

- The Guru Gobind Singh Indraprastha (GGSIP) University was established in 1998 as an affiliating and teaching university with a focus on professional education. The University is functioning from its new campus at Dwarka. There is a proposal to establish another (East) campus of the University at Surajmal Vihar, for which the necessary clearances are in process. With an enrolment of 62,000, the University has 13 Schools of Studies in its campus. In addition, 77 self-financing institutes and 23 Government institutes are affiliated to the University. The Bharat Ratna Dr. B.R. Ambedkar University was established by the Government of NCT in the year 2008, and it comprises 10 Schools of Studies covering 9 programmes, with 629 students enrolled in 2011-12.

- The National Law University (NLU), established by the Government of NCT of Delhi, in 2008, is one of the premier law institutes in the country. It was established with the vision to create a global legal institution which would compete with the best outside India. In 2011-12, it had 6 academic programmes with 337 students enrolled in them.

Source: Government of NCT of Delhi, Directorate of Higher Education, Twelfth Five Year Plan.

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of GGSIP University, Ambedkar University, National Law University (NLU), Indraprastha Institute of Information Technology, DTU, Delhi Pharmaceutical Science and Research University, Delhi Institute of Tool Engineering, Institute of Heritage Management and Research has also contributed, to a great extent, in making Delhi an educational hub (Box 3.3).

3.5 Issues and Interventions to Promote Education

The educational progress attained in Delhi so far has been the result of cumulative interventions over the years. While market forces have created spaces for the privileged classes and the poor have not benefited much from the expansion of private schools and colleges, planning processes have played a significant role in providing educational benefits to the poor. The recent planned interventions that have been undertaken by the state towards educational development include:

- Setting up of a new a Technical University for Women, two new Medical Colleges, a Para-medical Staff Training Institute, a world class Skill Development Centre in collaboration with ITE, Singapore, and a Regional Vocational Training Institute, among others, all of which would contribute towards facilitating improvements in higher and professional education in both quantitative and qualitative terms.

- The Master Plan of Delhi (MPD–2021) recommends that there should be one senior secondary school for every 10,000 population. As per the recommendation, 550 new senior secondary schools need to be set up during the Twelfth Five Year Plan period for a projected population of 19.0 million by 2017. This, in turn, requires massive investments in the form of school infrastructure as well as the recruitment of teachers and other support staff. The private sector could also be a partner in the investments required if the Delhi Development Authority (DDA) allots land to develop private schools at concessional rates with the condition that these schools allocate 25 per cent of their seats under the free-ship quota to the economically weaker students.

- Despite a high literacy rate, the prevalence of a gender gap in literacy is a matter of concern. There is thus need for coordinated and integrated efforts through planned schemes like Ladli, better scholarships, free transport facilities for girl students in the rural areas, and the programme for empowerment of women through Gender Resource Centres and ICDS projects for reducing this gender gap.

- The Government of Delhi has started a number of programmes to improve the

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Box 3.4

Delhi: Initiatives in Higher Education during the Twelfth Plan

1. Financial assistance for students of economically weaker sections: The Government of NCT Delhi has framed the 'Yuva Nirman Scheme' under 'The Delhi Higher Education Aid Trust', whereby scholarships are to be provided to the socially and economically backward students of state universities and affiliated institutes on a merit-cum-means basis. There is also provisioning for scholarships/reimbursements of half the tuition fee for professional courses to students whose maximum family income from all sources is Rs. 0.2 million.

2. Award for college lecturers: In order to incentivise lecturers to impart quality education, a cash prize of Rs. 75,000 is slated to be given to the best lecturer in each of the 28 colleges funded by the Government of NCT of Delhi and affiliated to the University of Delhi.

3. Promotion of sports facilities in University Colleges: A proposed outlay of Rs. 25 million has been allocated under the Twelfth Plan to promote sports facilities in Delhi University Colleges.

4. Award for meritorious students in Government-funded colleges: A cash award of Rs. 10,000 is proposed to be given to the toppers of Arts, Science and Commerce streams in all Delhi University colleges.

5. Construction of hostels for college-going female students in Delhi: At present, five DU colleges namely, Miranda House, Lady Shri Ram (LSR) College, Indraprastha (IP) College, Lady Irwin College and Daulat Ram College have hostel facilities. In view of the acute scarcity of hostels for girls, the Twelfth Plan has made an allocation for constructing hostels in DU colleges.

6. Sufficient allocations have been made under capital expenditure for strengthening the Directorate of Higher Education, and for construction of the Ambedkar State University and East Campus of the GGSIP University, Law University and new buildings of DU colleges.

Source: Government of NCT of Delhi, Directorate of Higher Education, Twelfth Five Year Plan.

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quality of education in government schools. The impact of these programmes is also visible in the results of the secondary and senior secondary CBSE examinations. However, there is still scope for further improvement. The difference in the performance of the Pratibha Vikas Vidyalayas above other government schools showcases the quality of education offered by them and the need to bring other government schools up to the same standards. However, in view of the lack of timely allotment of suitable sites to the Government of Delhi and the MCD for opening new schools, the classes in these schools are being held in tents and semi-pucca buildings. Thus, a proper land allotment policy needs to be implemented so that allotment of the new sites for schools can be done 5-6 years in advance to facilitate the timely construction of school buildings so that stop-gap measures do not have to be resorted to.

• The MPD–2021 recommends the holding of second shifts in schools in view of the problem of land and space. Private schools could be allowed to hold second shifts in their school complexes if they fulfil all the requirements prescribed by the Directorate of Education.

• While at the primary and middle levels, 28 per cent of all children attend private schools, this proportion is much higher at 42 per cent for the secondary level.[1] Such an imbalance needs to be addressed by instituting more government secondary schools to improve access especially for children belonging to the economically backward classes.

• The Directorate of Education has developed computerised modules for Management Information Systems (MIS) for the following areas:

  i) Transfer/posting of teaching and non-teaching staff;

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1. Government of NCT of Delhi, Directorate of Higher Education, Twelfth Five Year Plan.

ii)   Personal information system;

iii) Students' enrolment;

iv)   Financial budget control;

v)   School Infrastructure;

vi)   Attendance of employees on the Internet; and

vii) On-line admission in Government schools under the Directorate of Education.

- The holding of second shifts for classes have become more acceptable in the state with the aggressive expansion of technical education institutions over the last 4-5 years. The phenomenon of female students being increasingly able to avail of hostel and food facilities has also resulted in higher enrolments.

3.6 Challenges and Strategic Thinking in Education

While the Government of Delhi has undertaken various planned interventions in the sphere of education, there are many challenges that still need to be addressed, some of which include: maintaining the teacher–pupil ratio as per the norms; provision of support to the economically weaker categories of students; ensuring autonomy in the management of institutions; setting up of an independent accreditation body for schools and independent evaluations of learning achievements. If all these measures were to be implemented, they would go a long way in promoting inclusion and quality in education.

Some of the other challenges in the sphere of education in Delhi that need to be addressed are as follows:

- Delhi is a state wherein shadow education is on the rise, and tuitions and coaching centres are mushrooming. The factors that give rise to this phenomenon may be a matter of academic debate; however, it is definitely both the cause as well as the effect of a class divide in education. This can be countered through interventions aimed at strengthening mainstream education and containing the proliferation of coaching and tuition centres.

- The Government of Delhi has taken necessary steps for the implementation of the Right to Education (RTE) Act. However, as noted above, the problem of co-ordination in implementing the RTE in schools under different managements still remains.

- The University of Delhi attracts a large number of students for admission into its different colleges every year. Even though students manage to secure college admission, finding proper accommodation remains a challenge as most colleges have limited hostel facilities. Nearly 30 per cent of the students (approximately 19,000 in number) enrolling across DU colleges come from outside Delhi and compete for just 1,000 seats in the campus hostels. The remaining almost 18,000 first-year students have to turn elsewhere for accommodation every year. Such students then have to seek accommodations at exorbitant rents and also have to face the concomitant problems of food and hygiene. Foreign students and women students, too, do not have separate hostels.[1] Hence, there is an urgent need to expand hostel infrastructure in the colleges of Delhi University.

- Municipal schools in the national capital face a severe shortage of teachers. According to official data, 5,568 posts for teachers are lying vacant in around 1,750 schools run by the three civic bodies.[2] The erstwhile MCD has since been trifurcated. Before the trifurcation, the MCD had filled 3,848 posts of teachers during the years 2009-10 and 2011-12. However, 5,568 posts still continue to remain vacant (The Tribune, 2 September 2012). Many DU colleges and departments are also functioning with ad hoc teachers due to a large number of vacancies that are yet to be filled since 2008. More than 40 per cent of the teaching positions in colleges are lying vacant and the situation could worsen with teachers recruited as far back as 1969 due to retire in the near future. While ad-hoc teachers have teaching duties similar to the permanent ones, they have to renew their contracts every four months, and are also not entitled to receive benefits like medical allowances or

1.   *India Today*, 5 July 2012.

2.   *The Tribune*, 2 September 2012.

basic reimbursements. This lack of benefits and the sustained insecurity among the adhoc teachers thus leads to a serious drop in the quality of their teaching as well as in the research environment. The problem of shortage of teachers in DU colleges, therefore, needs to be dealt with urgently (The Times of India, 16 January 2012).

- There are 12 fully sponsored colleges run by the Delhi Government. Another 16 colleges are funded to the extent of 5 per cent by the Delhi Government. The need of the hour is thus to support all the 28 colleges through Plan funding by strengthening sports, hostel and residential infrastructure.

Strategic thinking in education in the context of the capital state of Delhi is also required for facilitating the implementation of the following measures:

- Innovative thinking for a Meta University in Delhi is underway and the Jamia Milia Islamia, DU, JNU, and IIT, New Delhi are envisaged to play a role in the same. Meta Universities enable the sharing of learning resources from different universities by using the latest technologies for the benefit of students. They represent second generation universities, which are free from physical boundaries with the ability to operate in virtual space, taking advantage of the innovation and flexibility possible in such domains. Under the Cluster Innovation Centre of Delhi University, the 'Master of Mathematics Education' is a Joint Degree being offered jointly by DU and Jamia Milia Islamia University.

- The introduction of the four-year undergraduate progamme (FYUP) in DU has also been a radical move. The Delhi University's Academic Council gave its nod to convert the coveted three-year undergraduate programme into four years, with the entire structure of the traditional course coming in for a major overhaul from the 2013-14 session onwards. The course will now give the students the option to discontinue the programme after two years with an associate degree, after three years with a Bachelor's degree, and acquire an Honours degree after completion of all the four years. Sports and cultural activities would form part of the curriculum and the course would be multi-

disciplinary, allowing students to choose subjects across streams. However, the launching of this programme in Delhi distorts the three-year undergraduate structure prevalent in the rest of the country, and experts feel that such a sudden change in the under-graduate structure demands wider consultations and careful implementation.

- Government school reform necessitates the devolution of greater autonomy in management to school authorities. The 73rd and 74th Constitutional Amendments require Panchayati Raj and local administrative bodies, the third-tier of administration in villages and urban areas, to manage local schools. However, much of the administrative controls over schools in Delhi still rest with the state and Central governments. The Right of Children to Free and Compulsory Education Bill, 2009, mandates the setting up of SMCs, with parental and community representation. Although this is a welcome move, the SMCs need to be empowered with the necessary controls over school management covering the areas of recruitment of qualified teachers and removal of irresponsible staff, thereby increasing accountability and enhancing community involvement.

- The introduction of performance pay incentives for teachers (both individual and group) constitute another reform measure that would encourage better teaching and learning outcomes and quality of education. As the names suggest, the first incentive has been provided to teachers whose class-group has shown improvements in learning outcomes and the latter incentive is provided to the entire group of teachers under whom students show overall improvements across the board.

- The quality of education received by students is paramount and over-rides all other concerns. Rather than allowing for the continued emphasis on enrolments, learning outcomes need to become the prime area of attention of public policy. Undertaking an independent assessment of learning achievements is the only way of ensuring this and it could serve as a starting point for future educational policies. For instance, independent studies of learning

achievements by the NGO Pratham, published in the latter's Annual Status of Education Report (ASER), 2012, show that less than 50 per cent of Standard V children are able to read textbooks prescribed for Standard II.

- The setting up of an independent accreditation body for schools would help inform and empower parents to make the right choice of schooling for their children. An alternative could be the setting up of a State Institute for Learning Assessments, which would study and assess the school-wise academic performances of students (from, say, Standard III onwards) and would help in defining the standards of learning achievements   for both government and government-aided schools, thereby making them more performance-oriented.

3.7 In Summary

The basic motivation for the discussion presented in this chapter has been to convey that Delhi, being the capital of India, is a state that occupies a place of unique importance. People of varied backgrounds, both national as well as international, cultures, religions and social groups, live together here in a state of peace and harmony, while engaging in various economic, political and administrative activities. This necessitates the promotion of a culture of humanism, tolerance and togetherness that can only be sustained through a high-quality, purposeful and inclusive education system. Delhi is the academic hub of India, and is responsible for nurturing human resources with education and skills of the highest standards. Further, since Delhi is a part of the NCR, the growth of educational institutions in the city should be seen as part of the NCR plans for human development.

In 2011, Delhi recorded a literacy rate of 86.3 per cent, which signified an increase of approximately 4.7 percentage points over 2001. There is also a variation in literacy rates across districts. The gender gap in literacy stands at close to 11 percentage points, despite there being a narrowing down in the same over the decade 2001-2011. The policy pointer that emerges from these findings is that given a relatively persistent and high gender gap in literacy, strategies for promoting female literacy need to be prioritised as short-term policy interventions. The prevalence of low GERs for the SCs and STs in 2010-11 (69.5 and 54.1, respectively) at the primary and upper primary levels, and even lower GERs for the same social

groups at the secondary and senior secondary levels highlight the possible difficulties in transitioning faced by children hailing from these social groups, including vulnerability, lack of appropriate institutions for enrolment or their willingness to join the labour market. Hence, there is a need to provide incentives in policy design for ensuring success in the transitioning of these children to higher levels of education, especially the socially and economically weak students. The educational participation of slum children in Delhi is mainly in government schools, however these children subsequently drop out from school due to financial reasons or the negative perception of schooling by their parents.

While primary education is principally the responsibility of the state government in Delhi, the private sector does play a prominent role in providing the same. Space constraints for running schools compels a majority of the schools to run double shifts.

There does seem to be gender parity in school enrolment at the primary level, which is an encouraging phenomenon. The presence of the private sector in schooling is more marked at the secondary and senior secondary levels, covering close to 42.7 per cent of those who attend school (Economic Survey, 2013). Various interventions aimed at implementing the RTE Act (2009) have also been put into place to realise the goal of UEE. What is thus needed is regular monitoring and effective implementation of the various Clauses of the RTE Act by a committee of experts and the subsequent apprising of these measures to the Delhi Government. The RTE Act also needs to be implemented more effectively by bringing schools run by different types of management under a uniform structure of management, which would help address all issues pertaining to coordination. The same Expert Committee could also examine various aspects leading to dropouts and lacunae in the learning achievements, particularly of children from the unauthorised settlements. The role of the SSA in implementing the RTE would then be optimally utilised. For children with special needs, it is imperative to ensure adequate and requisite training for teachers, coupled with the institution of curricular and other support systems. The efforts and initiatives already being made by certain schools to address the issue of CWSNs are commendable. Data on educational achievements in Standard XII reveal that government schools are now at par with private schools in terms of students' performance, with girls' schools registering a higher pass percentage as compared to boys' schools.

The average number of years of schooling for Delhi calculated by using the NSS 66th Round data (2009-10) has been found to be 7.5 years at the aggregate level. When disaggregated by social groups, Delhi fares well except for the STs (which could be showing a downward bias as a population group because of small sample size). When the trend in the average number of years of schooling is studied over the period 1993-94 to 2009-10, SCs show an improvement from 2.9 years to 5.8 years, which could be attributed to the interventions under the SSA that are specially targeted for this social group. The STs, on the other hand, show a decline in this indicator over the same time period from 5.8 years to 3.2 years, which could be attributed to either the high in-migration of the illiterate ST population into Delhi or small sample size biases. Inclusive education strategies, therefore, need to focus on these two population groups in particular, when aiming to achieve advances in the average number of years of schooling. In order to reach a target of ten years of average schooling for Delhi's populace by the year 2020-21, it is estimated that capacities at the primary and upper primary levels need to be increased by at least 50 per cent, at the secondary and senior secondary levels by 60 per cent, and at the tertiary levels by 25 per cent.

The higher education scenario in Delhi is very promising, with 160 colleges operating in 2012, including 83 in DU, and 77 affiliated with the GGSIP University. Since DU, JNU and Jamia Milia Islamia University are Central universities, they offer no quota or preference for Delhi students. In the field of professional and technical education, Delhi has 107 degree and PG level professional and technical educational institutions that are affiliated to the GGSIP University, DU, and other universities. The well-known institutions—AIIMS, IIT, and ISI add special status to the state by promoting sheer excellence in education. There are 11 deemed universities specialising in different disciplines as well.

The area that needs to be addressed in the field of higher education in Delhi is an expansion of hostel infrastructure in the Delhi colleges, coupled with improvements in quality, and filling up of all teacher vacancies through government consultations with the University Grants Commission (UGC) and DU. There is also a need to strengthen mainstream educational structures in terms of quality and inclusiveness in order to bridge class and social divides. It is necessary to make private institutions partners in the development of education rather than allowing them to function as instruments of

division in the social and economic structure of Delhi. Furthermore, education should create a climate of healthy debate on all matters that make India a prosperous and progressive nation.

The main findings from the Perceptions Survey (2013) highlight the need for first, facilitating the upward educational transition of those having acquired education up to the primary and middle school levels, who comprise over one-third of Delhi's population, thus enabling them to acquire higher education or skill sets. The conversion of illiterates into literates with adequate skill sets is also a priority area. Second, the SCs and Muslims constitute only a small proportion of those having acquired higher education, thereby emerging as the two critical target groups for whom the transition to higher education levels needs to be the focus for policy interventions. Third, low education and literacy levels among the population residing in unauthorised colonies, JJ clusters, urban villages and resettlement colonies call for strategic interventions coupled with monitoring and close supervision of targets under the SSA. Some policy imperatives are thus needed to help push the vulnerable population groups up on the literacy and education ladders, and to make the educational processes in Delhi more inclusive. Fourth, when studied by occupational structure, three categories of workers constituting almost three-fourths of the population, viz., those in the service industry, and skilled but low-paid and unskilled workers possess low levels of education. What is needed is an upgradation of the skills of this set of workers with appropriate certification in order to improve their market value and employability. This can be achieved by forging partnerships with NGOs and industry associations to upgrade and promote skill formation among this group of workers.

Some of the recent planned interventions to promote educational development in the state, especially for the poor and underprivileged sections, need to be highlighted. These are detailed here. First, the setting up of various higher educational institutions to improve the professional education scenario in the state during the Twelfth Plan period (including the setting up of a Technical University for Women, two new Medical Colleges, a Para-medical Staff Training Institute, and a world class Skill Development Centre in collaboration with ITE, Singapore). Second, in accordance with the MPD–2021, the setting up of 550 new senior secondary schools along with the requisite infrastructure and teaching staff is on the anvil. Third, initiatives such as Ladli, offering of scholarships and free transport facilities for

female children in rural areas, setting up of Gender Resource Centres for female empowerment and ICDS projects have been instituted to effectively address the existing gender gap in literacy; Fourth, a number of programmes have been initiated to help improve the quality of education in government schools, the impact of which is seen in the results of the secondary and senior secondary CBSE examinations. Fifth, the advent of computerisation and introduction of MIS' for education-related information, including student enrolment, transfer/posting of teaching and non-teaching staff, Personal Information Systems, financial budget control, school infrastructure, and employee attendance have been significant achievements in the sphere of education in Delhi. Finally, with second shifts gaining acceptance, expansion of technical institutes, and increase in female enrolments in higher education, the accompanying availability of hostel and food facilities needs to be enhanced.

Along with the myriad planned interventions that are being put into place in the education sector, many challenges still exist that need to be effectively addressed for making the education system in the state more inclusive and egalitarian. Some of these possible interventions are:

1. Maintaining the teacher–pupil ratio as per norms;

2. Providing greater support to the economically weaker categories of students;

3. Introducing autonomy in the management of institutions;

4. Setting up an independent accreditation body for schools and for the conduction of independent evaluations of learning achievements;

5. Interventions aimed at strengthening mainstream education in order to control the phenomenon of shadow education and the proliferation of coaching and tuition centres;

6. Better coordination in implementing RTE in schools under different managements;

7. Enhancement of the hostel and residential infrastructure;

8. Tackling the shortage of teachers in municipal schools;

9. Filling up of teacher vacancies in DU colleges and various departments;

10. Innovative thinking for the setting up of a Meta University which would facilitate the sharing of learning resources from different universities by using the latest technologies;

11. Transitioning to the FYUP in DU, with regard to which many experts feel that sudden changes in the education structure demand wider consultations and careful implementation.

12. Introducing performance pay incentives as a reform measure to encourage better teaching and learning outcomes;

13. Undertaking independent assessments of learning achievements to examine the quality of education, which may serve as a starting point for the introduction of future educational policies. The setting up of an independent accreditation body for schools would also inform and empower parents to make the right choice for their child's schooling. An alternative could be the setting up of an independent body (such as a State Institute for Learning Assessment) that would study and assess the school-wise academic performances of students (from, say, Standard 3 upwards).

Annex 3.1

Annexure Table 3.1 gives the assumed distribution of population in 2020-21, as against the already existing distribution of population in 2009-10 by levels of education. The hypothetical distribution in 2020-21 assumes that the population is at least educated up to the primary level. It is clear that with a hypothetical distribution in 2020-21, the average number of years of schooling is 10.3 years. (For calculation, see Footnote 2 of the chapter). It has been noted in the text that the average number of ten years of schooling could be achieved through many pathways, assuming different distributions of population by levels of education. If the hypothetical distribution of the population assumed here is followed, then at the middle level, expansion has to take place by roughly 100 per cent, at the secondary and senior secondary levels by roughly 50 per cent, and at the tertiary level by roughly 20 per cent. It may be noted here that since in 2020-21, there would be an absolute increase in the population as well as that compared to the level of population in 2009-10, the capacity expansion would be a multiple of the capacity expansion envisaged above. The multiplier would depend on the extent of increase in the population in 2020-21 over the population in 2009-10. Thus, assuming that the population increases by 50 per cent, the capacity expansion then at the middle (including the primary level), secondary, and senior secondary and tertiary levels would have to be 150, 75 and 30 per cent, respectively. However, this method of arriving at capacity expansion represents a crude methodology. The exact capacity expansion necessitates a detailed planning exercise which would take into account the complete age cohort.

Annex Table 3.1

Assumed Distribution of Population in 2020-21, Against the Existing Distribution of Population in 2009-10 by Levels of Education

Educational Attainment	2009-10	2020-21	Capacity Expansion, Assuming the Existing (in per cent)	Capacity Expansion, Assuming a 50 per cent Population Increase in the Population (in per cent)
Illiterate	17.8	0		
Below the primary level	11.6	0		
Primary level	14.2	15		
Middle level	11.8	25	100	150
Secondary level	13.8	20	50	75
Senior secondary level	13.7	20	50	75
Tertiary level	17.1	20	20	30
Total	100.0	100		